- Significant investment has been made to replace re-usable medical equipment, for example, Entonox masks and suction canisters with disposable alternatives. Disposable covers are provided for laryngoscope blades and single use bougies for intubation have been supplied;
- Infection control training is provided during all patient transport services and emergency technician training courses in which the importance of cleaning is included.

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Children and mini-magnets: comments and suggestions

I read with interest ''Children and mini-magnets''[1] for I had previously listed similar events.[2] The authors illustrate the difficulty of separating attracted magnets when avoiding further trauma to the entrapped tissue, as the usual methods—of sliding the magnets apart, or using standard instruments—cannot be used. It is possible to ''short out'' the effective strength of a magnet (in the same way that the soft iron keeper of a horseshoe magnet greatly diminishes its external attraction) by putting a high permeability material between the poles. One such material is ''Permalloy'', and pieces and sheet can be formed around a magnet. (McCormick *et al* do not seem to list the magnetisation directions in the shape they encountered, so one cannot make any more specific suggestions.) Permalloy might be available in your friendly neighbourhood physics department. Another technique is to put a third similar magnet against one of the two problem ones.

Here in the USA, powerful magnets are used to hold ear ''rings'' or ear studs in place. A friend, who has given magnetic jewelled studs as science encouragement to pre-teen girls, has received thanks from their mothers: the mothers emphatically prefer the magnets to pierced ears.

I am curious about the origin of the Sheffield magnets: extremely powerful ones are found in discarded computer hard drives, but they have irregular shapes.

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Radiology in paediatric cervical spine injury

I read with interest the letter by Smart *et al*[1] regarding the assessment of paediatric cervical spine injuries.

It would certainly appear that many children in their cohort were radiographed unnecessarily according to current guidelines. However, I would hope that the practice in their institution has changed dramatically in the six years since the group attended.

Current guidelines on selection of patients for imaging are based primarily on adults. In the NEXUS group, only 30 children had a cervical spine injury,[2] and in the Canadian c-spine group, there were no children at all.[3]

Extrapolating these results to children who may be distressed or uncooperative should be performed with caution.

The low prevalence of cervical spine injuries in children makes guidelines difficult to create. In an 11 year analysis of the Trauma Audit Network Database, only 239 children (of 19 538 with major trauma) were identified as having a cervical spine fracture and 21 with spinal cord injury without radiological abnormality (unpublished data).

I am concerned that the authors feel that a single lateral projection should be adequate. The evidence for omitting the PEG view is based on small case series[4] or questionnaires,[5] and certainly the odontoid synchondrosis should be ossified by the age of 7.

Imaging of the paediatric cervical spine remains a difficult problem. As the authors confirm, there is no substitute for adequate clinical assessment, but where this is not possible, every effort should be made to rule out a potentially devastating injury.

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Emergency department investigation of deep vein thrombosis

Kilroy *et al* should be commended for highlighting the difficulty of point of care (''near patient'') testing in general, and in emergency medicine in particular.[1] They, however, failed to highlight some important points that may have been significant confounding variables in this study. Firstly, the authors quite rightly pointed out the qualitative nature of the SimpliRED D-dimer (DD) assay and the inherent possibility for interobserver variation. Although this is a ''simple'' assay and comparatively accurate in experienced hands, there is a learning curve in performing and interpreting the results that the authors failed to emphasise. How steep or otherwise was the learning curves of the doctors assessing the SimpliRED test? The robustness of the data would have been improved if interobserver reliability was measured, for example by κ and weighted κ statistics. Secondly, cut off points are critical in diagnostic testing because they determine the assay sensitivity and specificity.[2] For example, if the DD cut off is set too low, then the test is too sensitive and not specific, so almost everyone ends up being positive and the test loses meaning. What was the cut off value for DVT diagnosis in this study? Was it based on receiver operator characteristic (ROC) curves (a scientifically valid method of determining diagnostic cut off values)? Differences in cut off values may explain the differences observed in the diagnostic performance of the assay in this study and Wells' original data.[3] Finally, to ensure good applicability, when choosing a DD assay it should be verified that the assay has been studied in a patient population similar to that in which it would be used. Did the authors extrapolate a cut off point for DVT diagnosis from the manufacturer of the assay? If so, was their study population similar to that of the manufacturer's?

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Fractured clavicle and vascular complications

A 55 year old right handed man presented with a three month history of left arm pain and precordial chest discomfort. His symptoms had started three months previously after a heavy game of squash. Three years before the acute episode, he was involved in a motorcycle accident and had sustained a left mid-clavicular fracture.

On clinical examination he was in sinus rhythm and the supine blood pressure was 146/94 mm Hg in the right arm. He had a cold left arm with no recordable blood pressure. The left axillary, brachial, and radial pulses were absent. A bruit was audible over the left subclavian artery. The fasting total cholesterol was 4.4 mmol/l.

The chest radiograph showed non-union and displacement of the fragments of the left clavicle. Three dimensional contrast enhanced magnetic resonance angiography (CE-MRA) showed a small false aneurysm (diameter 1.5 cm) in the mid-portion of the left subclavian artery (see fig 1). In addition there was a stenosis of the left subclavian artery adjacent to the aneurysm with an intraluminal thrombus, immediately distal to the point of stenosis. The aneurysm probably resulted from insult to the subclavian artery by the clavicular fracture and aggravated by squash playing.

Percutaneous balloon angioplasty with stent deployment to the left subclavian artery was attempted. The procedure was complicated by acute thrombosis in situ, requiring intra-arterial thrombolysis with streptokinase. Restoration of blood flow was achieved by a reverse vein graft bypass between thoraco-acromial and brachial arteries.

Injury to the subclavian artery should be considered in all patients who complain of ischaemic symptoms in the arm after clavicular fracture. Furthermore, this case